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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/712,058

11/14/2003

Phil D'Eon

10387-28

9051

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7590

11/15/2006

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EXAMINER

STARKS, WILBERT L

ART UNIT

PAPER NUMBER

2129

DATE MAILED: 11/15/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/712,058	Applicant(s) D'EON ET AL.	
	Examiner Wilbert L. Starks, Jr.	Art Unit 2129	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Claim Rejections - 35 U.S.C. §101

1. 35 U.S.C. §101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

the invention as disclosed in claims 1-16 is directed to non-statutory subject matter.

2. Regardless of whether any of the claims are in the technological arts, none of them is limited to practical applications in the technological arts. Examiner finds that *In re Warmerdam*, 33 F.3d 1354, 31 USPQ2d 1754 (Fed. Cir. 1994) controls the 35 U.S.C. §101 issues on that point for reasons made clear by the Federal Circuit in *AT&T Corp. v. Excel Communications, Inc.*, 50 USPQ2d 1447 (Fed. Cir. 1999). Specifically, the Federal Circuit held that the act of:

...[T]aking several abstract ideas and manipulating them together adds nothing to the basic equation. *AT&T v. Excel* at 1453 quoting *In re Warmerdam*, 33 F.3d 1354, 1360 (Fed. Cir. 1994).

Examiner finds that Applicant's "attribute data" references are just such abstract ideas.

3. Examiner bases his position upon guidance provided by the Federal Circuit in *In re Warmerdam*, as interpreted by *AT&T v. Excel*. This set of precedents is within the same line of cases as the *Alappat-State Street Bank* decisions and is in complete

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agreement with those decisions. *Warmerdam* is consistent with *State Street*'s holding that:

Today we hold that *the transformation of data, representing discrete dollar amounts, by a machine through a series of mathematical calculations into a final share price*, constitutes a practical application of a mathematical algorithm, formula, or calculation because it produces 'a useful, concrete and tangible result' -- *a final share price momentarily fixed for recording purposes and even accepted and relied upon by regulatory authorities and in subsequent trades.* (emphasis added) *State Street Bank* at 1601.

4. True enough, that case later eliminated the "business method exception" in order to show that business methods were not per se nonstatutory, but the court clearly *did not* go so far as to make business methods *per se* statutory. A plain reading of the excerpt above shows that the Court was *very specific* in its definition of the new *practical application*. It would have been much easier for the court to say that "business methods were per se statutory" than it was to define the practical application in the case as "...the transformation of data, representing discrete dollar amounts, by a machine through a series of mathematical calculations into a final share price..."

5. The court was being very specific.

6. Additionally, the court was also careful to specify that the "useful, concrete and tangible result" it found was "a final share price momentarily fixed for recording purposes and even accepted and relied upon by regulatory authorities and in subsequent trades." (i.e. the trading activity is the further practical use of the real world

monetary data beyond the transformation in the computer – i.e., “post-processing activity”.)

7. Applicant cites no such specific results to define a useful, concrete and tangible result. Neither does Applicant specify the associated practical application with the kind of specificity the Federal Circuit used.

8. Furthermore, in the case *In re Warmerdam*, the Federal Circuit held that:

...[T]he dispositive issue for assessing compliance with Section 101 in this case is whether the claim is for a process that goes beyond simply manipulating ‘abstract ideas’ or ‘natural phenomena’ ... As the Supreme Court has made clear, ‘[a]n idea of itself is not patentable, ... taking several abstract ideas and manipulating them together adds nothing to the basic equation.’ *In re Warmerdam* 31 USPQ2d at 1759 (emphasis added).

9. Since the Federal Circuit held in *Warmerdam* that this is the “dispositive issue” when it judged the usefulness, concreteness, and tangibility of the claim limitations in that case, Examiner in the present case views this holding as the dispositive issue for determining whether a claim is “useful, concrete, and tangible” in similar cases. Accordingly, the Examiner finds that Applicant manipulated a set of abstract “attribute data” to solve purely algorithmic problems in the abstract (i.e., what *kind* of “attribute data” is used? Heart rhythm data? Algebraic equations? Boolean logic problems? Fuzzy logic algorithms? Probabilistic word problems? Philosophical ideas? Even vague expressions, about which even reasonable persons could differ as to their meaning? Combinations thereof?) Clearly, a claim for manipulation of “attribute data” is provably even more abstract (and thereby less limited in practical application) than pure “mathematical algorithms” which the Supreme Court has held are per se nonstatutory – in fact, it *includes* the expression of nonstatutory mathematical algorithms.

10. Since the claims are not limited to exclude such abstractions, the broadest reasonable interpretation of the claim limitations includes such abstractions. Therefore, the claims are impermissibly abstract under 35 U.S.C. §101 doctrine.

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11. Since *Warmerdam* is within the *Alappat-State Street Bank* line of cases, it takes the same view of “useful, concrete, and tangible” the Federal Circuit applied in *State Street Bank*. Therefore, under *State Street Bank*, this could not be a “useful, concrete and tangible result”. There is only manipulation of abstract ideas.

12. The Federal Circuit validated the use of *Warmerdam* in its more recent *AT&T Corp. v. Excel Communications, Inc.* decision. The Court reminded us that:

Finally, the decision in *In re Warmerdam*, 33 F.3d 1354, 31 USPQ2d 1754 (Fed. Cir. 1994) is not to the contrary. *** The court found that the claimed process did nothing more than manipulate basic mathematical constructs and concluded that ‘taking several abstract ideas and manipulating them together adds nothing to the basic equation’; hence, the court held that the claims were properly rejected under §101 ... Whether one agrees with the court’s conclusion on the facts, the holding of the case is a straightforward application of the basic principle that mere laws of nature, natural phenomena, and abstract ideas are not within the categories of inventions or discoveries that may be patented under §101. (emphasis added) *AT&T Corp. v. Excel Communications, Inc.*, 50 USPQ2d 1447, 1453 (Fed. Cir. 1999).

13. Remember that in *In re Warmerdam*, the Court said that this was the dispositive issue to be considered. In the *AT&T* decision cited above, the Court reaffirms that this is the issue for assessing the “useful, concrete, and tangible” nature of a set of claims under §101 doctrine. Accordingly, Examiner views the *Warmerdam* holding as the dispositive issue in this analogous case.

14. The fact that the invention is merely the manipulation of *abstract ideas* is clear. The data referred to by Applicant’s phrase “attribute data” is simply an abstract construct that does not provide limitations in the claims to the transformation of real

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world data (such as monetary data or heart rhythm data) by some disclosed process.

Consequently, the necessary conclusion under *AT&T*, *State Street* and *Warmerdam*, is straightforward and clear. The claims take several abstract ideas (i.e., "attribute data" in the abstract) and manipulate them together adding nothing to the basic equation.

Claims 1-16 are, thereby, rejected under 35 U.S.C. §101.

Claim Rejections - 35 U.S.C. §112

The following is a quotation of the first paragraph of 35 U.S.C. §112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-16 are rejected under 35 U.S.C. §112, first paragraph because current case law (and accordingly, the MPEP) require such a rejection if a §101 rejection is given because when Applicant has not in fact disclosed the practical application for the invention, as a matter of law there is no way Applicant could have disclosed *how* to practice the *undisclosed* practical application. This is how the MPEP puts it:

("The how to use prong of section 112 **incorporates as a matter of law** the requirement of 35 U.S.C. §101 that the specification disclose as a matter of fact a practical utility for the invention.... If the application fails as a matter of fact to satisfy 35 U.S.C. §101, then the application also fails as a matter of law to enable one of ordinary skill in the art to use the invention under 35 U.S.C. §112."; In re Kirk, 376 F.2d 936, 942, 153 USPQ 48, 53 (CCPA 1967) ("Necessarily, compliance with § 112 requires a description of how to use presently useful inventions, **otherwise an applicant would anomalously be required to teach how to use a useless invention.**") See, MPEP 2107.01(IV), quoting In re Kirk (emphasis added).

Therefore, claims 1-16 are rejected on this basis.

Response to Arguments

Applicant's arguments filed 08/17/2006 have been fully considered but they are not persuasive. Specifically, Applicant argues:

Argument 1

The Examiner has referred to the State Street Bank case and noted that "the court was also careful to specify that the "useful, concrete and tangible result" it found was 'a final share price momentarily fixed for recording purposes and even accepted and relied upon by regulatory authorities and in subsequent trades.' (ie. the trading activity is the further practical use of the real world monetary data beyond the transformation in the computer - ie., 'post-processing activity'.)" It is interesting to note in response that the 'post-processing [trading] activity' is not in fact cited in the claims in the 5,193,056 patent which the court was considering.

First, Examiners are not permitted to comment on the validity of allowed patents. Therefore, Examiner cannot comment about those issues regarding that particular patent.

Now, confining my remarks as to what is or isn't in the claims referred to by Applicant, Examiner notes that Claim 1 contains the following limitation: "...capital gain or loss for the portfolio and each of the funds." Capital gain (or loss) is the post-processing activity that Applicant asserts is not in the claim. Examiner finds it to be clear and express, as the Court implied it was.

Applicant's argument is not persuasive. Therefore, the rejections STAND.

Argument 2

As set out in the specification, for example in the discussion relating to Figures 5A-5C (paragraph 44 - 57), the claimed methodology of claim 1 provides for the diagnosing of a root cause of problem case. The root cause, then, is the "useful, concrete, and tangible result" required under s.101, which the technician may act upon - eg. "find and correct the source of the oil leak" (Fig. 2C).

The MPEP at §2106.11.A states "The purpose of the [useful, concrete and tangible result] requirement is to limit patent protection to inventions that possess a certain level of "real world" value, as opposed to subject matter that represents nothing more than an idea or concept, or is simply a starting point for future investigation or research. (Brenner v. Manson, 383 U.S. 519, 528-36, 148 USPQ 689, 693-96); In re Ziegler, 992, F.2d. 1197, 1200-03, 26 USPQ2d 1600, 1603-06 (Fed. Cir. 1993).

It is submitted that the root cause of a problem may be analogized to the "final share price" in the State Street case. Similarly, the technician's post-processing corrective activity may be analogized to the post-processing trading activity identified in State Street.

As set out in the MPEP §2106.II.A, "An applicant may assert more than one practical application, but only one is necessary to satisfy the utility requirement." As noted above, it is submitted that the Applicant has asserted a practical application of the claimed invention including a certain level of "real world" value.

A "cause" is a thing that brings about a "result." Applicant is required to give a "useful, concrete and tangible result" in order to make the claim statutory. A "cause" is not a "result." Further, Applicant has not provided limitations to a practical application...whether the intent is to provide an automobile diagnostic system, a forensic system regarding causes of possible crimes, a medical diagnosis system, a system regarding precursors (i.e., causes) for earthquakes, an epidemiologic system dealing with the causes of disease or injury, etc. Each of these is a different invention. The only thing each of these inventions has in common is the underlying algorithm.

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Applicant claims only the underlying commonality between these inventions...the raw algorithm devoid of any limitations to practical applications. This is impermissible under 35 U.S.C. §101. Therefore, the rejections STAND.

Argument 3

Furthermore, it is submitted that the Examiner's objection to the term "attribute data" as being an abstract term appears unfounded and inconsistent with Patent Office practice. It is respectfully submitted that this objection should therefore be withdrawn.

In the field of case based reasoning, "attribute" is a commonly accepted and applied term. This assertion is consistent with the Patent Office's practise of issuing patents relating to case-based reasoning or knowledge systems and methodologies having claims containing the words "attribute" or "attributes": see for example U.S. Patent Nos. 6,704,719; 6,571,251; 6,353,817; 6,353,813; 6,345,264; 6,311,173; 6,212,528; 6,081,798; 6,026,399; :1,822,743; 5,402,524.

It is not apparent why the use of the term "attribute data" in the context of the present application would be construed to be more abstract than "attribute" or "attributes" in the context of the above-listed patents. It is also worth noting that the subject matter of the claims in the above-listed patents was not considered by the Patent Office to be impermissibly abstract, but rather was found to satisfy the requirements of §101 as being directed towards practical applications in the technical arts.

Again, it is improper for Examiners to comment on the validity of previously allowed patents.

Further, prior patents do not provide stare decisis over decisions regarding current patent applications. Each case is to be decided regarding its own compliance with patent law. Examiner has provided the law that applies to the facts at hand and has

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explained its application. Applicant has not shifted his burden by referencing other allowed patents.

Further, the term "attribute" may be an "accepted" term, but it is abstract from practical applications in the real world in the same way that the word "variable" is a well-accepted word, but is also abstract from any practical application.

Put another way; consider a "pure mathematical algorithm." By itself, it is per se nonstatutory, according to Supreme Court precedent. Now, suppose we populate this algorithm with unspecified "variables." The algorithm remains abstract. The manipulation of abstract "variables" adds nothing to the basic equation...it is still abstract.

The same is true for the term "attributes". It is a synonym for the word "variables". Applicant has not answered the question: "attributes" of...what? It is unspecified...abstract from any practical application. Therefore, Applicant has not shifted his burden to show why unnamed "attributes" are "concrete" or "tangible" in any way.

Further, Applicant has not amended the claim to provide statutory matter.

Accordingly, the rejections of the claims STAND.

Argument 4

For the reasons noted, it is submitted that the rejection of claim 1 based under §101 should be withdrawn. Accordingly, it is further submitted that claim 1 and all claims which depend therefrom (claims 2-5), should be considered as being directed towards statutory subject matter in accordance with §101, and the rejection should be withdrawn.

In view of the Applicant's submissions regarding the withdrawal of the §101 objection to claim 1 and its dependent claims (claims 2-5), it is submitted that the rejection pursuant to §112 is moot and should also be withdrawn.

Applicant seems to assert that since claim 1 is incorporated by reference into dependent claims 2-5, the matter that he asserts as being statutory are, likewise, incorporated by reference into claims 2-5.

Examiner has shown above how claim 1 is devoid of statutory matter. Therefore, there is no statutory matter to incorporate into the dependent claims by reference.

Accordingly, the status of those claims remains unaffected. The rejections of all the claims at issue STAND.

Argument 5

Claim 6 (and 7-10)

Claim 6 is directed towards a case-based reasoning system for determining a root cause of a problem case. For reasons similar to those noted above in relation to claim 1, claim 6 may be characterized as being directed towards specific machinery to produce a useful, concrete and tangible result.

For the reasons noted, it is submitted that the rejection of claim 6 based under §101 should be withdrawn. Accordingly, it is further submitted that claim 6 and all claims which depend therefrom

(claims 7-10), should be considered as being directed towards statutory subject matter in accordance with §101, and the rejection should be withdrawn.

In view of the Applicant's submissions regarding the withdrawal of the §101 objection to claim 6 and its dependent claims (claims 7-10), it is submitted that **the rejection pursuant to §112 is moot and should also be withdrawn.**

Applicant seems to import the reasoning used to assert that claim 1 was statutory into an argument for claim 6 (and its dependents.) Examiner has shown above how the reasons for asserting that claim 1 is statutory are erroneous. The importation of erroneous argumentation into this argument is insufficient to shift applicants burden on the issue. Further, the basis for the §112 rejections remains undisturbed. Applicant has not told one of ordinary skill in the art how to practice a practical application because he has not referenced a practical application at all in the claims.

Accordingly, the status of those claims remains unaffected. The rejections of all the claims at issue STAND.

Argument 6

Claim 11 (and 12-15)

Claim 11 is directed towards a method for determining a root cause of a problem case using a case-based reasoning system. For reasons similar to those noted above in relation to claim 1, claim 11 may be characterized as being directed towards specific methodology to produce a useful, concrete and tangible result.

Accordingly, it is submitted that **claim 11 and all claims which depend therefrom (claims 12-15), should be considered as being directed towards statutory subject matter in accordance with §101, and the rejection should be withdrawn.** Similarly, it is submitted that **the rejection of claims 11-15 pursuant to §112 is moot and should also be withdrawn.**

Applicant seems to import the reasoning used to assert that claim 1 was statutory into an argument for claim 11 (and its dependents.) Examiner has shown above how the reasons for asserting that claim 1 is statutory are erroneous. The importation of erroneous argumentation into this argument is insufficient to shift applicants burden on the issue. Further, the basis for the §112 rejections remains undisturbed. Applicant has not told one of ordinary skill in the art how to practice a practical application because he has not referenced a practical application at all in the claims.

Accordingly, the status of those claims remains unaffected. The rejections of all the claims at issue STAND.

Argument 7

Claim 16

Claim 16 is directed towards a method for creating data for use in a case based reasoning system. In this instance, the generated data is the "useful, concrete, and tangible result". This data is in turn able to be used in a case based reasoning system, which it has been argued is patentable subject matter. Accordingly, for reasons similar to those noted above in relation to claim 1, claim 16 may also be characterized as being directed towards specific methodology to produce a useful, concrete and tangible result.

Accordingly, it is submitted that claim 16, should be considered as being directed towards statutory subject matter in accordance with §101, and the rejection should be withdrawn. Similarly, it is submitted that the rejection of claim 16 pursuant to §112 is moot and should also be withdrawn.

Applicant seems to import the reasoning used to assert that claim 1 was statutory into an argument for claim 16. Examiner has shown above how the reasons for

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asserting that claim 1 is statutory are erroneous. The importation of erroneous argumentation into this argument is insufficient to shift applicants burden on the issue. Further, the basis for the §112 rejections remains undisturbed. Applicant has not told one of ordinary skill in the art how to practice a practical application because he has not referenced a practical application at all in the claims.

Accordingly, the status of those claims remains unaffected. The rejections of all the claims at issue STAND.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 C.F.R. §1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 C.F.R. §1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

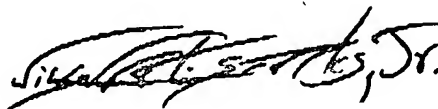
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Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Wilbert L. Starks, Jr. whose telephone number is (571) 272-3691.

Alternatively, inquiries may be directed to the following:

S. P. E. David Vincent (571) 272-3080

Official (FAX) (571) 273-8300

A handwritten signature in black ink, appearing to read "Wilbert L. Starks, Jr.", with a stylized, cursive script.

Wilbert L. Starks, Jr.
Primary Examiner
Art Unit 2129

WLS

26 October 2006